Installation of Hospital Cash Registers in Coast Provincial General Hospital in Kenya: A Case Study

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INSTALLATION OF HOSPITAL CASH REGISTERS: A CASE STUDY

BACKGROUND

In February 1998, MSH carried out an operational assessment and feasibility study for conversion to institutional autonomy.

The conclusions and recommendations resulted in the identification of three major challenges facing the organization as it advances toward autonomous status:

1. The need to strengthen board and management
   - 1.1 Legal framework must be in place with clear and unambiguous guidelines on the role, functions, and powers of the board which supports full control of the hospital by its governing board
   - 1.2 Both senior and mid level managers require skills building in supervision, teambuilding, planning and budgeting, and communication

2. Restructuring and reengineering will be necessary to replace nonfunctioning systems to improve hospital performance and quality of services.

3. The need to increase hospital revenues was identified as the **highest priority**.

METHOD of APPROACH

1. A review of the existing income/revenue system revealed a wide discrepancy between the potential gross revenue from service charges to patients and the actual cash being collected and reported each month. It became clear that the existing manual system for receipting and accounting was fraught with errors, fraud and abuse.

2. Current locations of cash collection points were studied relevant to inpatient and outpatient accessibility, and convenience to the service departments- x-ray, lab, and pharmacy.

3. The collection system design should include:
   - 3.1 Hardware:
     - Point of sale terminal/unit with cash drawer and client display screen, and prints receipts
     - Printer at each terminal and at the central server– prints invoices and reports

- Central Server- is on-line with each terminal and contains the operating software for each collection point, and receives and stores data collected at each point
- Power back-up system

3.2 Software: (Needs to be user-friendly, staff have limited computer skills)

- Designed to operate at any retail outlet to facilitate recording transactions of revenue collected, services offered, and any invoices raised

- Customized to facilitate capturing both inpatient and outpatient transactions in hospitals

- All users are assigned user code and pass word that determines user access rights to the system

- Transactions can be traced by cashier and collection point

- A debtors module to be used to process debtors transactions, including the National Hospital Insurance Fund (NHIF)

OBJECTIVE

The overall objective was to determine if the introduction of "cash registers" would improve cash collections, accounting and reporting, and patient satisfaction (shorter queues/waiting time).

ADMINISTRATIVE DECISION

Purchase system as designed including 5 terminals for cash collection points

OUTCOMES

Installation began on 10 June 1998

System became operational on 7 August 1998

Previous 5 months (April, May, June, July) 1998 –

- **Average monthly cash collected was 1.3M Kenya shillings (Ksh)**

The 5 months following installation (September, October, November, December, January)

- **Average monthly cash collected was 2.1M Ksh**

In 1999, May through October- a drastic drop in utilization and collections due to major renovations – main theatre, x-ray, dental, MCH, mortuary, and 3-wards.

In November 1999, reopened newly renovated departments, wards, and the all new maternity block – plus, there was an increase in fees implemented in November '99.

Utilization of hospital services decreased 10% in both November and December 1999.

For April 2000 - cash collections were 4.8 M – Cash and NHIF claims were 5.2M Ksh
For May 2000 - cash collections were 5.8 M – Cash and NHIF claims were 6.3M Ksh
(see graph at end)

LESSONS LEARNED

1. Not all inpatient charges were being captured. This conclusion was made based on an audit of randomly selected discharged inpatient records compared with the actual invoice of charges. Charges for services received were not recorded, and frequently, total days in the hospital were incorrect. Also, lacking a standardized process for inpatient discharges, patients were leaving without paying.

2. The installation and utilization of the new system did not include a review of the inpatient discharge and revenue collection procedure

3. NHIF – No consistent procedure for verifying

CORRECTIVE ACTION

1. The inpatient discharge process was reviewed utilizing the "flowcharting" technique. The step by step process was standardized for all inpatient wards,

   plus –

2. Assigning a "discharge nurse" to overview/audit each discharged patient's record for completeness prior to forwarding to the cashier for invoicing (see flowchart)

FUTURE PLANNED NEEDS

The original plan for a financial management information system was dropped after review of the technical capability of the accounting staff, and the successful operational performance of the cash register system. In its place an upgraded software system that integrated patient registration with patient accounting was designed and installed in August 2000.

1. The Upgraded Software Package Includes:

- **1.1 Outpatient register**
- **1.2 Inpatient register**
- **1.3 Admissions/Discharge/Transfers (ADT)**
- **1.4 On line inpatient billing**
- **1.5 On line outpatient billing for noncash (corporate) accounts**
- **1.6 Receipting/Refunding/Paying out (multi cash points)**
- **1.7 Full debtors ledger**

2. Patient Software Reports Include:

- **2.1 Listing of all patients registered**
- **2.2 Daily bed occupancy**
- **2.3 Per cent of bed occupancy, bed vacancy**
- **2.4 Attendance register**
- **2.5 List of daily admissions and discharges**
- **2.6 On-line interim and final patient invoice**
- **2.7 Revenue reports- by service, by period (day, week, month)**
- **2.8 NHIF rebate / refund listing**
- **2.9 Statement of corporate accounts**
- **2.10 Aged debtors listing**
- **2.11 Activity report per cash point, by shift - date, time in, time out, cash collection (name, service paid for, amount, and mode of payment), total cash/charges/cards, payments**

COAST PGH CASH & NHIF CLAIMS